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A Seroepidemiologic Survey of Brucellosis in Human and Animals in Birjand, East of Iran

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Keywords: Brucellosis; Birjand; Seroprevalence

Background and Objectives: Brucellosis is a major bacterial zoonosis of global importance. In Iran human brucellosis is endemic in all parts of the country and Brucellosis is a significant health problem in Iran. The aims of this study were determination of seroprevelance of brucellosis in sheep, goat, cattle and human and evaluate the correlation between human and animal brucellosis in Birjand, a sub-tropical city in east of Iran.

Methods: Among 472106 patients referred to hygiene centers and 12113 cattle and 7199 sheep and goat sera samples which tested by veterinary organization of South Khorasan province, Iran during 2002-2006, statistical analysis was performed to show the prevalence rate of brucellosis. Pearson correlation coefficient was used to evaluate the correlation between animal and human brucellosis.

Results: Results shows that the prevalence rate of brucellosis during 2002—2006 in Human was 37 per 100,000, in sheep and goat were 340 per 10,000, and in cattle were 56 per 10000. Statistical analysis showed that Pearson correlation coefficient of cattle and sheep brucellosis ($r = +0.746$), cattle and human ($r = +0.228$), human and sheep ($r = +0.304$) are positive but incomplete

Conclusion: According to the results of this study prevalence of brucellosis in the Birjand population was much lower than in the reports of other countries of the region. Higher correlation between sheep and human brucellosis is due to consumption of sheep raw milk, cheese and meat or direct contact with sheep in Birjand.

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Epidemiology and clinical predictors of GAβHS among students in Alexandria, Egypt

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Pharyngotonsilitis in one of the most common respiratory diseases in the community among childhood. Nearly 28% - 40% are estimated to be caused by GAβHS which is considered the most important etiological pathogen in the terms of complications.

Objectives: To study the epidemiology and to determine the clinical predictors of GAβHS pharyngitis.

Methods: A cross- sectional study was conducted over a period of one year where primary and preparatory school children (600) attending school health insurance clinics and suffering from pharyngotosilitis were screened. The data collection tools included questionnaire interview inquiring about demographic data, clinical data and a throat swab was taken for culture on a 5% sheep blood agar plate then subjected to Bacitracin susceptibility. Chi square tests were used, Logistic regression analysis was performed to predict the significant variables that were significantly associated with GAβHS.

Results: the overall prevalence of GAβHS pharyngitis was 30.3%, and the peak prevalence was in spring. The Prevalence of GAβHS decreased with age, positive cultured cases reported family history of rheumatic fever, recent contact with pharyngotosilitis cases. The predictive clinical criteria for GAβHS pharyngitis were tender anterior cervical lymph node, enlarged lymph node, a history of contact with cases, limb pain and enlarged tonsils.

Conclusion: further researched are needed to reevaluate continually the clinical sings associated with GAβHS in the light of epidemiologic and demographic characteristics.

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Seroepidemiology of Helicobacter pylori Infection Among Health Care Workers

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Introduction: Helicobacter pylori is a worldwide infection. Helicobacter pylori has now been well recognised to play a significant role in the pathogenesis of gastroduodenal disease. The prevalence is low in developed countries but high in developing countries. However very few data are actually available on H. pylori seroprevalence in Zahedan city. To determine the seroprevalence of Helicobacter pylori (H pylori) among health care workers and to assess the relationship between H pylori infection, age, sex, education stand, number of family, water source.

Methods and materials: This was a cross-sectional study which conducted on 97 healthy individual of health care

workers in Zahedan .These subjects were chosen randomaly. Socio-demographic information was collected using questionnaires.The diagnosis of H. pylori infection was based on serological test using ELISA technique and measurement of IgG with 94% sensivity and 98% specificity. These data were analyzed using SPSS (Chi-square, Odds ratio, pearson, linear regression).

Results: A total of 97 individuals were included in the study. 64 patients (66%) were females and 33 (34%) were males.In general, the prevalence of H. pylori infection was 34%. No significant difference in the prevalence between males and females. Also there was no correlation between H. pylori infection and age, family member and water source ($p = 0.965$). There was a significant correlation between education and H. pylori infection. ($p = 0.04$).

Conclusion: Upon the result emerged from our study, the prevalence of H. pylori infection was 34%. H. pylori infection is endemic in Zahedan, although the prevalence recorded was lower than those observed in similar developing regions. Improvement in hygienic conditions and socioeconomic status, can decrease the rate of This infection. It should however be noted that only health cares workers were studied and the possibilities of having higher prevalence in other health settings and/or in the general population is not unlikely.

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High Rate of Meningococcal Disease in Baja-California, Mexico: An Unknown Endemic Disease with a Rate Similar to the USA

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Background: Meningococcal Disease (MD) is reported with a rate of 0.06/100,000 in Mexico, much lower than the 0.44/100,000 reported in the US. Tijuana, Baja-California, is a Mexican city that borders with San Diego, California, with a daily 50,000 people transit through the border. The real incidence of MD is unknown in this region.

Methods: From Oct/15th to Jan/15th, an active search for MD was performed prospectively at the General Hospital of Tijuana, Baja-California, Mexico. Patients between 1 month and 16 years of age were included. Clinical, demographical and microbiological characteristics were analyzed.

Results: A total of 14 confirmed (an approximate rate of 0.45/100,000) and 6 probable MD cases were found. From confirmed cases, 5 had clinical purpura (CP) and meningitis, 2 CP without meningitis and 7 meningitis without CP. Avg age was 5.2 years (5m - 16y), all children were local. Most cases were seen during winter and autumn, and a previous upper respiratory infection was present in 50% of cases. Incidence of serogroups found were C (64.3%), B (14.3%), Y (7.1%) and unknown (14.3%). Overall mortality was high (21%), and the presence of CP, trombocytopenia and prolonged clotting factors at admission were associated with poor prognosis. Furthermore, N. meningitidis was the major cause of confirmed bacterial meningitis.

Conclusions: MD is endemic in Baja-California, Mexico, with similar rates to the US, but much higher when compared to Mexican-National reports. Serogroup C was the most prevalent, and immunization should be a Public Health issue in this Mexican region.

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Prevalence and Predictors of Methicillin-Resistant Staphylococcus aureus (MRSA) and Extended-Spectrum Beta-Lactamase (ESBL) Gram-Negative Bacteria at Hospital Presentation in Singapore

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Background: Methicillin resistance occurs in 66% of nosocomial Staphylococcus aureus while ESBL in 21% Escherichia coli and 51% Klebsiella pneumoniae at our institution. Community-onset MRSA and vancomycin-resistant enterococci (VRE) occur locally. We wish to determine the prevalence and predictors of colonisation by MRSA, VRE and ESBL-positive Gram-negative bacilli (GNB) in patients admitted from our Emergency Department.

Methods: All adult patients >16 years of age consenting to participation underwent nasal, axilla, groin and rectal swabs, processed by validated published methods to screen for MRSA, VRE and ESBL-positive GNB. A questionnaire was used to record age, gender, co-morbidity, nursing home residence, contact with healthcare workers; hospitalisation, visit to hospital outpatient, general practitioners or government polyclinics within 3 and 12 months; and oral antibiotic use within 1 and 3 months. Univariate and multivariate analysis were performed to determine independent predictors of colonisation by MRSA, VRE and ESBL-positive GNB.

Results: Of 1003 patients recruited, mean age was 47 years; male comprised 65% and nursing home residents 2.2%. Diabetes mellitus occurred in 21%. Hospitalisation within 3 and 12 months was noted in 17% and 27% respectively. Visit to hospital outpatient, government polyclinics and general practitioners within 12 months occurred in 48%, 44% and 48% respectively. Oral antibiotic was taken by 28% within last 3 months. MRSA colonisation occurred in 1.8% and ESBL-positive GNB 12% while none had VRE. The only independent predictor of MRSA colonisation was hospitalisation within 3 months (adjusted odds ratio 3.9, $p = 0.04$) and of ESBL-positive GNB colonisation was oral antibiotic within 1 month (adjusted odds ratio 1.9, $p = 0.02$).

Conclusions: MRSA and VRE colonisation remain a nosocomial problem while oral antibiotic use in the community has